

## IN THE CLAIMS:

Please amend the following claims:

1. (Currently Amended) A process for the wet fractionation of cereal bran components, wherein ~~bran being the fibrous residue resulting from a primary grain milling, i.e. after the separation of the endosperm fraction, of~~ obtained from wheat, barley, oat, rye and triticale and having a ~~variable chemical composition, a presence of anti-nutritive factors, and various anatomical fractions, i.e. pericarp, germ, and residual endosperm, into protein, sugar and insoluble fractions~~ the process wherein bran substantially devoid of the endosperm fraction is subjected to a first enzymatic treatment utilizing a combination of enzymes of the group containing starch-hydrolysing enzymes, and aqueous wet milling, ~~followed by an optional step of enzyme inactivation by wet heat treatment, and a subsequent step whereby the resultant aqueous slurry/suspension is a separated separation~~ into an insoluble fibrous fraction and a soluble fraction, and wherein said soluble fraction is further separated by centrifugal forces into a germ-rich fraction and an endosperm and sugar-rich fraction, and that the said endosperm and sugar-rich fraction is further separated into proteins and sugars ~~contained in the endosperm-rich fraction are separated, and;~~

said insoluble fibrous fraction containing a cleaned bran consisting of both insoluble pericarp and aleurone fractions, is further subjected to a hydrolysed hydrolyation by a second enzymatic treatment utilizing a combination of one or a mixture of enzymes of the group non-starch polysaccharidases, and aqueous wet-milling, ~~followed by an optional step of enzyme inactivation by wet heat treatment, and a subsequent step whereby the resultant hydrolysate is separated into an insoluble phase and a soluble phase.~~

1 2. (Canceled)

1 3. (Previously Presented) A process according to claim 1, wherein the first enzymatic  
2 treatment is accomplished using a starch degrading enzyme of the groups amylases and  
3 amyloglucosidases.

1 4. (Previously Presented) A process according to claim 1, wherein the second enzymatic  
2 treatment is carried out using at least one non-starch degrading polysaccharidase in the form  
3 of cellulases, hemicellulases mainly xylanases, beta-glucanases, and pectinases, and/or  
4 phytases.

1 5. (Canceled)

1 6. (Currently Amended) A process according to claim 1, wherein the insoluble phase obtained  
2 from the hydrolysate and containing primarily insoluble fibers, i.e. of the group comprising  
3 cellulose, lignin, less accessible hemicellulose, residual aleurone cells and cell wall bound  
4 proteins is spray dried, and;  
5 the soluble phase obtained from the hydrolysate containing soluble hemicellulose,  
6 oligosaccharides, sugars and proteins, and said soluble phase is further separated [is] into a heavy  
7 phase containing mainly aleurone cell protein and a light phase containing hemicellulose in the  
8 form of soluble hemicellulose and oligosaccharides, and;  
9 said light phase is further separated by size exclusion technique into soluble hemicellulose  
10 (medium molecular size fraction) and oligosaccharides mixed with sugars (small molecular size  
11 fraction).

1 7. (Previously Presented) A process according to claim 1, wherein cleaned bran is cereal bran  
2 substantially free of both in water or less polar solvents soluble compounds, derived from  
3 wheat, barley, oat, rye or triticale.

1 8. (Previously Presented) A process according to claim 1, wherein the combination of  
2 intermittent wet milling with enzymatic treatment is arranged to increase the rate of enzymatic  
3 hydrolysis of the substrate thereby improving the overall hydrolysis performance and the  
4 subsequent separation of the various fractions by density/solubility and molecular size.

1 9. (Canceled)

1 10. (Previously Presented) A process according to claim 4, wherein the second enzymatic  
2 treatment is accomplished using xylanases with high beta 1-4-xylanase (pentosanase) and/or  
3 beta-glucanase activity.

1 11-39. (Canceled)

1 40. (Withdrawn) A set up for carrying out the process according to claim 1, wherein it  
2 comprises a hydrolysis vessel, a wet mill, a heat exchange for enzymatic inactivation, decanters,  
3 a holding tank, an ultra-filter, and optionally at least an evaporator, and dryers.

1 41. (Withdrawn) A set up for carrying out the process according to claim 5, wherein it  
2 comprises a hydrolysis vessels, a wet mill, a heat exchange for enzymatic inactivation, decanters,

3 a holding tank, an ultra-filter, and optionally evaporators, and dryers.

1 42. (Previously Presented) A process according to claim 1, wherein the first enzymatic  
2 treatment is carried out for less than 3 hours at a pH of 4 to 7.5 and at a temperature of from 50  
3 to 90°C, at an enzymatic activity of at least 1 IU/g of substrate, preferably 200 to 1500 IU/g of  
4 substrate.

1 43. (Previously Presented) A process according to claim 1, wherein the second enzymatic  
2 treatment is carried out for less than 3 hours at a pH of 4 to 7, preferably 4.5-5.5, and at a  
3 temperature of from 35 to 80°C, at an enzymatic activity of at least 1 IU/g of substrate,  
4 preferably 200 to 1500 IU/g of substrate.

1 44. (Canceled)